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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/680,911	10/08/2003	Yoshio Turner	100201444-2	6355

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EXAMINER	
MATTIS, JASON E	

ART UNIT	PAPER NUMBER
2616	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)
	10/680,911	TURNER ET AL.
	Examiner	**Art Unit**
	Jason E. Mattis	2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 July 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-13* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-13* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date *1 paper*.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This Office Action is in response to the Amendment filed 7/18/07. Claims 1-13 are currently pending in the application.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 has been amended to add the limitation stating, "wherein the increase function is adapted to recover the particular dataflow over a period of time after a decrease in the dataflow rate". It is unclear what exactly is meant by "recover the particular dataflow". It is recommended that this phrase be amended to state, "recover the particular dataflow rate" such that it is clear that it is the rate that is being recovered.

Claims 1 and 8 have been amended to add the limitation stating, "the period of time being a constant value for at least two different dataflow rates." It is unclear what is meant by this limitation. For example, it is unclear what the "two different dataflow rates" refers to (the rate before the decrease in rate, the rate after the decrease in rate, or some other particular rate). Further it is not clear whether there is support for this limitation in the original specification. It appears this limitation may arise from the discussion in paragraph beginning on page 6 of the Specification; however, this section makes it clear that the time behavior of the increase function for two arbitrary initial rates is identical except for a shift in the time origin. Thus, there is no support in the Specification for "the period of time being a constant value for at least two different dataflow rates", since the period of time is actual different by a shift in the time origin.

Claims 2-7 and 9-13 are rejected since they depend on either rejected claim 1 or claim 8.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1, 3-5, 8-11 and 13 are rejected under 35 U.S.C. 102(e) as being anticipated by Key et al. (U.S. Pat. 6842424 B1).

With respect to claim 1, Key et al. discloses a method for network bandwidth utilization **(See the abstract of Key et al. for reference to for adjusting data packet rates according to congestion patterns)**. Key et al. also discloses limiting a particular dataflow injected in a network form a dataflow source to a particular rate **(See the abstract of Key et al. for reference to limiting data packet transmission rates from a particular source)**. Key et al. further discloses marking data packets at a dataflow destination with marks that depend on the level of any intervening network congestion and returning packet marks indicating a degree of network congestion to the dataflow source **(See column 3 lines 10-30 of Key et al. for reference to using early congestion notification, ECN, to mark data packets at destinations to indicate a level of network congestion and for reference to sending the marks back to the source)**. Key et al. further discloses increasing the rate of the dataflow according to an increase function if the packet marks being returned indicate no congestion and decreasing the rate of the dataflow according to a decrease function if the packets marks being returned indicate congestion **(See column 9 lines 24-43 of Key et al. for reference to increasing a congestion window and corresponding data rate when an unmarked acknowledgement is received indicating no congestion and for reference to decreasing the congestion window and corresponding data rate when a marked acknowledgement is received indicating congestion)**. Key et al. also discloses the increase function being adapted to recover the particular dataflow rate over a constant period of time after a decrease in the dataflow rate regardless of the current dataflow rate **(See column 2 lines 58-65 of Key et al. for reference to using linear functions to increase a congestion window size after a decrease meaning the increase to a particular dataflow rate will take a constant time shifted by an initial time regardless of the current dataflow rate)**.

With respect to claim 3, Key et al. discloses decreasing by a function equivalent to the claimed function **(See column 9 lines 24-43 of Key et al. for reference to decreasing the window by ½ bounded by a minimum rate of 0 which corresponds to the MAX(r/m, R_{min}) having m equal to ½ and R_{min} equal to 0)**.

With respect to claims 4 and 5, Key et al. discloses using linear increasing and decreasing functions to adjust inter-packet delay **(See column 2 lines 58-65 of Key et al. for reference to using linear functions to adjust a congestion window size and its corresponding inter-packet delay)**.

With respect to claim 8, Key et al. discloses a network comprising a source node sending data packets in a dataflow to a destination node **(See the abstract of Key et al. for reference to transmitting packets from a source to a destination)**. Key et al. also discloses a rate controller to control the source node packet injection rate **(See column 9 lines 24-43 of Key et al. for reference to a controller adjusting a source node congestion window and corresponding data rate)**. Key et al. further discloses a destination node congestion monitor assessing whether received packets experienced congestion and providing a feedback signal to the rate controller **(See column 3 lines 10-30 of Key et al. for reference to using early congestion notification, ECN, to mark data packets at destinations to indicate a level of network congestion and for reference to sending the marks back to the source)**. Key et al. also discloses that the rate controller is responsive to the feedback signal to adjust the packet rate to minimize congestion and maximize data throughput **(See column 9 lines 24-43 of Key et al. for reference to adjusting the congestion**

window and corresponding data rate in response to received ECN marks in order to minimize congestion and maximize data throughput). Key et al. further discloses the rate controller being adapted to recover the rate of injection over a constant period of time after a decrease in the rate regardless of the current dataflow rate **(See column 2 lines 58-65 of Key et al. for reference to using linear functions to increase a congestion window size after a decrease meaning the increase to a particular dataflow rate will take a constant time shifted by an initial time regardless of the current dataflow rate).**

With respect to claims 9 and 10, Key et al. discloses the congestion monitor returning marked acknowledgement packets according to congestion for each node received **(See column 9 lines 24-43 of Key et al. for reference to sending packet acknowledgements including an ECN mark indicating whether a corresponding packet experienced congestion).**

With respect to claim 11, Key et al. discloses that the rate controller can independently and simultaneously control the rates of several data flows **(See column 9 lines 24-43 of Key et al. for reference to congestion being indicated separately on a per packet basis meaning the rate controller can independently and simultaneously control the rates of several data flows corresponding to the separate data packets).**

With respect to claim 13, Key et al. discloses decreasing by a function equivalent to the claimed function **(See column 9 lines 24-43 of Key et al. for**

reference to decreasing the window by ½ bounded by a minimum rate of 0 which corresponds to the MAX(r/m, R_{min}) having m equal to ½ and R_{min} equal to 0).

Allowable Subject Matter

6. Claims 2, 6, 7, and 12 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason E. Mattis whose telephone number is (571) 272-3154. The examiner can normally be reached on M-F 8AM-5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571) 272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

jem

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